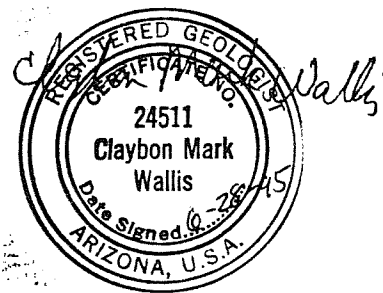


**MAGMA COPPER COMPANY
FLORENCE PROJECT**

**COREHOLE ABANDONMENT
WORK PLAN**

June 27, 1995



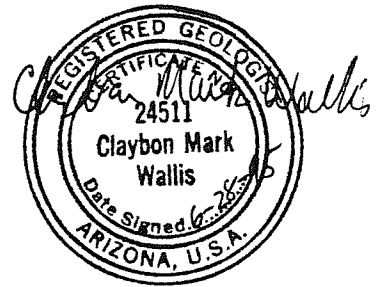


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SECTION 1.0

INTRODUCTION

1.1 OBJECTIVES

The objective of the corehole abandonment program outlined herein is to remove any potential influence the coreholes may have on the well installation and testing program currently being conducted, and future mining operations. Multiple monitoring, testing, and observation wells are currently being installed in 11 locations at the Florence Project as part of the aquifer testing program. Some of the coreholes that are located within a 300-foot radius of the 11 aquifer test well areas may be abandoned, depending on the results of the initial aquifer tests. The remaining coreholes will be abandoned throughout the mine life or in areas that may be affected, following completion of the hydrogeologic testing program.

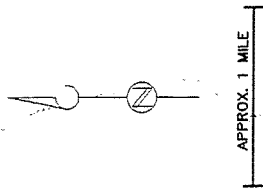
1.2 BACKGROUND INFORMATION

Magma Copper Company (Magma) is currently engaged in the development of a mineral property located near Florence, Arizona (see Figure 1). The property was acquired by Magma (14605 East Hunt Highway, Florence, Arizona 85232) in 1992.

Continental Oil Company (Conoco) previously performed an extensive underground investigation throughout the subject property from 1970 to 1976 to evaluate mineral content. The property is located in the Poston Butte mining district, 2 1/2 miles northwest of the Town of Florence in Pinal County, Arizona. The subsurface investigation, conducted by Conoco, involved advancing approximately 600 borings to depths ranging from 370 feet to 2,647 feet below ground surface using continuous coring methods. Locations of the coreholes are shown on Figure 2. The investigation involved:

- Setting 5 1/2-inch to 6-inch diameter surface casing to depths ranging from 45 feet to 70 feet below ground surface.
- Setting 3-inch diameter blank low carbon steel (LCS) casing to bedrock, ranging in depth from 40 feet to 1,586 feet below ground surface at the approximate depth of contact between the bedrock (quartz monzonite) and the basin fill. In some cases, the records indicate the 3-inch diameter casing was cemented into the formation. Visual inspection of some coreholes indicate the 3-inch casing is loose at the surface.
- Advancing the boring from the top of bedrock to the total depth of the corehole using NX or FX coring techniques.
- Surveying each corehole location.

Upon completion of coring activities, the coreholes were covered and left in their present condition. In some instances, the top portion of the corehole casing has been removed to facilitate farming operations. In selected areas of the project, the casing is visible at the surface.



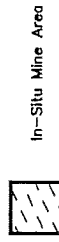
SURVEY PLAT

SHOWING MAGMA MINING PROPERTY IN:

Section 24, 25, T.4 S., R.8 E., and
Section 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 26, 27, 28,
29, 30, 31, 32, 33, 34, 35, T.4 S., R. 9 E.
Section 2, 3, T.5 S., R.9 E.
of the G & SRB & M, Pinal County, Arizona
Basis of Bearing is the South Township Line of T.4 S., R.9 E.
from the Dependent Re-survey Dated July 28, 1928, BLM Map
Number 1550. (N 89°51'00" W)

ALTA SURVEY PROJECT BOUNDARY

Parcel Numbers Refer to Title Report



In-Situ Mine Area

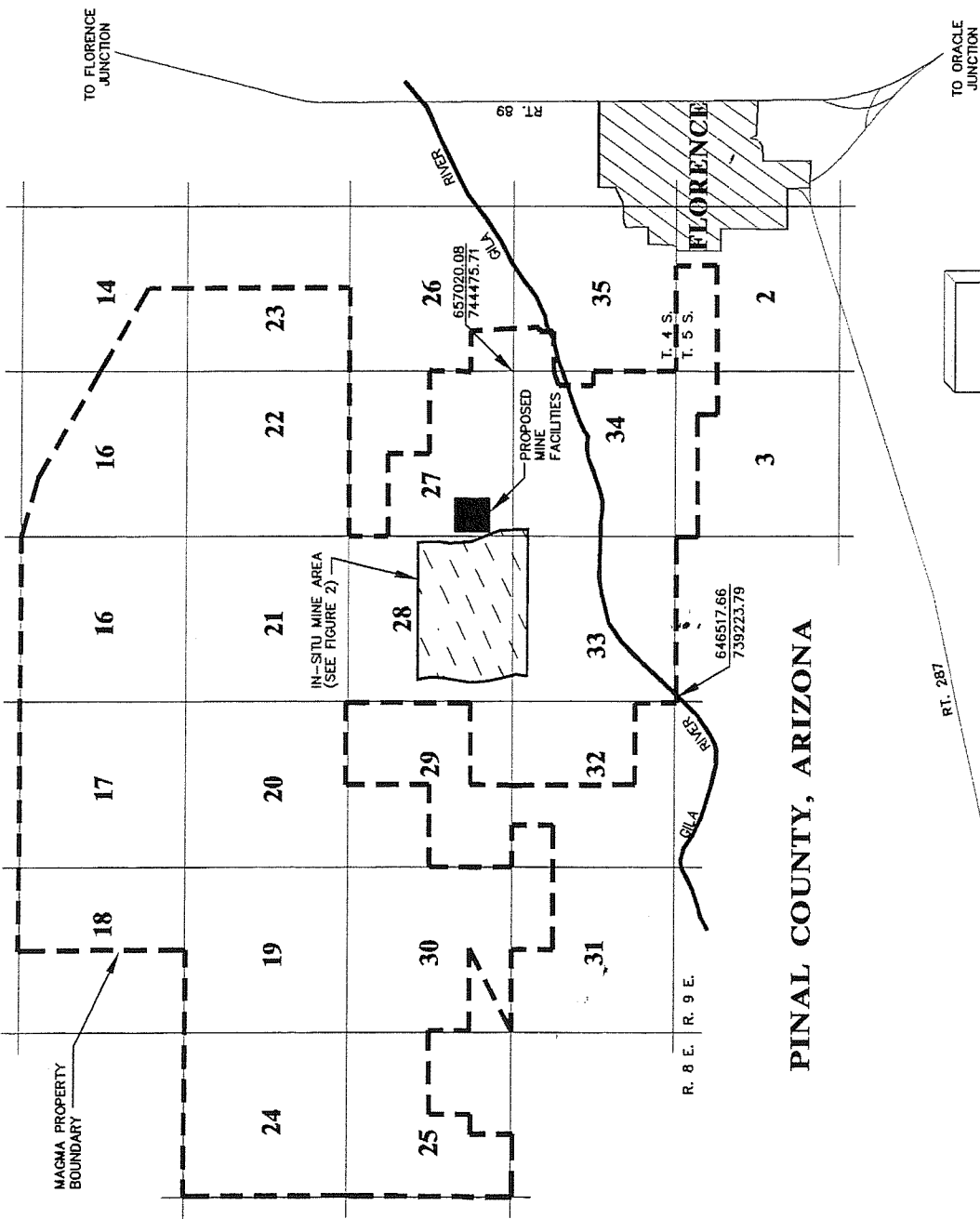
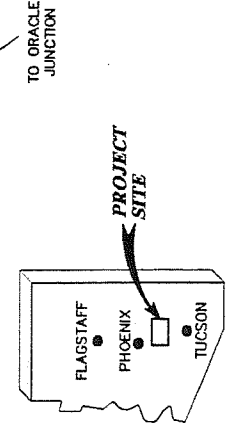


Figure 1

LOCATION MAP

MAGMA

MAGMA COPPER COMPANY
Florence, Arizona



ARIZONA
LOCATION MAP

PINAL COUNTY, ARIZONA

BROWN AND CALDWELL

SECTION 2.0

COREHOLE ABANDONMENT

2.1 GENERAL REQUIREMENTS

The following corehole abandonment program is in accordance with requirements established by the Arizona Administrative Code (AAC) Title 12, Chapter 15, Article 8, Section 16, Subsections A through K, dated 1993 and 40 CFR 146.10 (Underground Injection Control Program: Criteria and Standards). Magma will file with the Director of the State of Arizona Department of Water Resources (ADWR) the appropriate information for each of the coreholes identified for abandonment. The information will include the following:

- Site Information
 - Corehole owner and site address
 - Legal description of the site
- Well Driller Identification
- Corehole Description (location and status assessment)
- Abandonment Procedures
 - Corehole location
 - Backfilling the coreholes
 - Surface abandonment
- Corehole Abandonment Documentation
- Corehole Abandonment Completion Report

Additional information will be submitted as required.

The local terrain is characterized by low, rolling ridges and isolated peaks. The Gila River flows to the west, parallel to the southern boundary of the copper resource. The Florence Project is classified by ADWR as being in the Pinal Active Management Area (AMA) groundwater basin. Depth to water across the site is approximately 90 feet to 140 feet below ground surface. Available information indicates the regional groundwater gradient across the site to be to the northwest. Groundwater flow beneath the property is affected by seasonal pumping in the area for agricultural purposes and by occasional flows of the Gila River. Bedrock at the Florence Project consists of quartz monzonite which contains oxide and sulfide mineralization. The top of the bedrock dips to the west across the site and ranges in depth from 300 to 800 feet below land surface.

Water level information acquired to date suggests that generally the alluvial/sedimentary aquifer and bedrock aquifer are in hydrologic communication, with the bedrock aquifer possibly existing under semi-confined conditions in some areas. It is likely that the chemical character of the two

aquifers are different. Chemical characterization studies as well as extensive hydrogeologic investigations are currently being performed.

2.2 SITE INFORMATION

Site information, including owner information and site description, is presented in Section 1.0 and will be included with the well abandonment documentation.

2.3 WELL DRILLER IDENTIFICATION

The well driller to be used on this project will be Boyles Brothers Drilling Company, 6527 West Northview Avenue, Glendale, Arizona 85301. Boyles Brothers Drilling ADWR license number is 28 and the Registrar of Contractors (ROC) License Classification is Class A-04 076-386-002. ADWR will be notified if another driller is used to perform the abandonment tasks outlined herein. Such a contractor will be registered in the State of Arizona.

2.4 COREHOLE LOCATION AND STATUS ASSESSMENT

The location of all coreholes to be abandoned will be determined by the existing coordinates. The following information will be compiled for each borehole upon determination of its location:

- Verification of location of the corehole (survey of corehole location and comparison with previous coordinates. If necessary, a backhoe will be used to excavate the area surrounding the staked location until the corehole casing or other identification evidence is observed.
- Visual and physical inspection of corehole: Each corehole will be visually and/or physically inspected to determine the condition of the casing and boring. Inspection will include a determination if the casing is cemented into place or loose in the corehole. In addition, a determination of the contents of the casing will be made, the depth to water, if present, or if there is any blockage in the casing.

2.5 ABANDONMENT ACTIVITIES

The corehole abandonment program will focus on sealing each boring at the contact between the alluvial units and the bedrock (quartz monzonite). Each corehole will also be sealed at the surface, in compliance with all applicable regulations. Specific methods of abandonment may vary for each boring depending on the results of the initial inspection and/or observation made during the corehole location and status assessment. Figure 3 depicts a typical corehole with a summary of abandonment techniques.

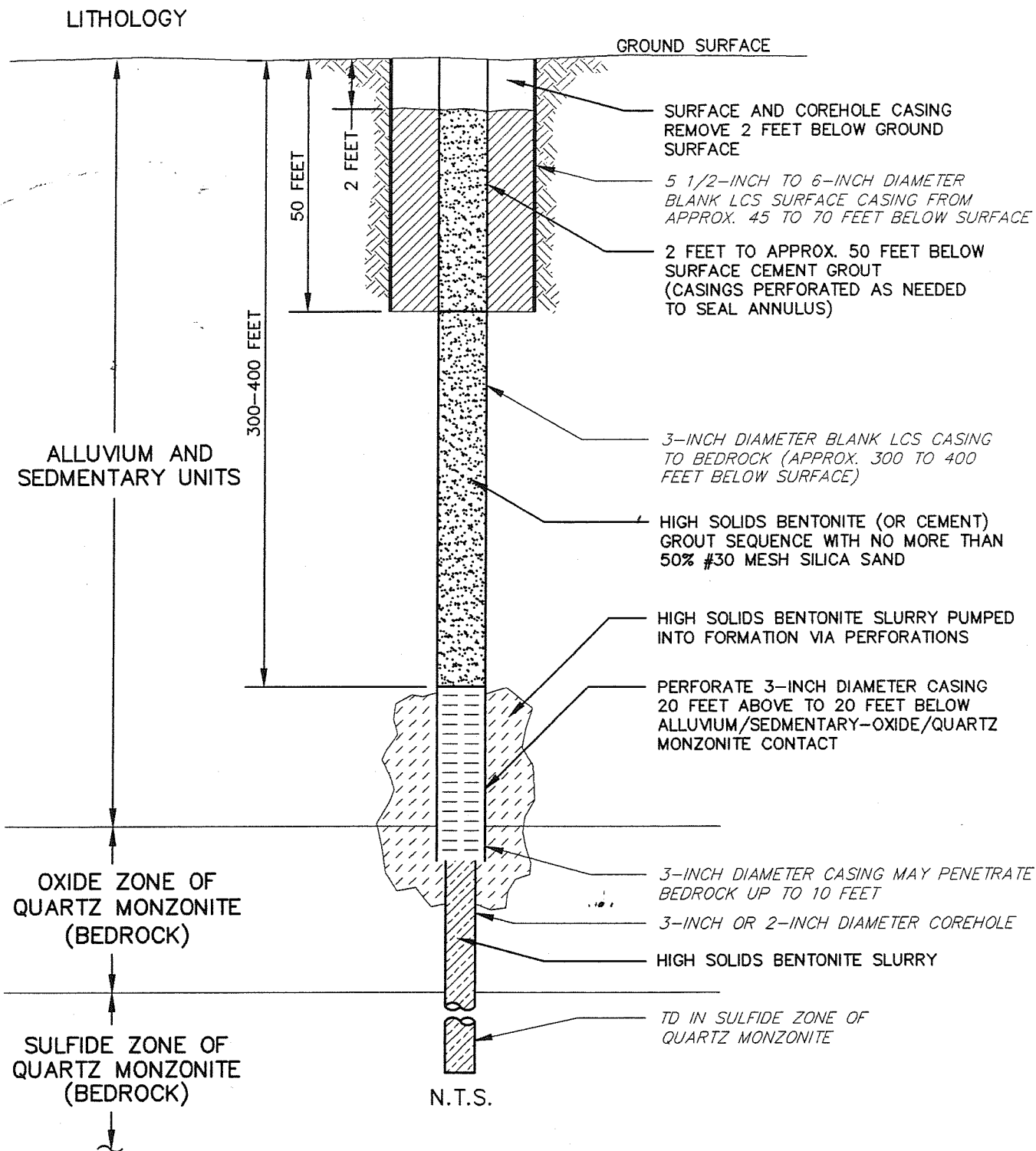


Figure 3

**TYPICAL COREHOLE
CONFIGURATION AND
ABANDONMENT TECHNIQUES**

LEGEND

- COREHOLE = PRESENT COREHOLE CONSTRUCTION
- COREHOLE = PROPOSED ABANDONMENT TECHNIQUES

BROWN AND CALDWELL

MAGMA
MAGMA COPPER COMPANY
Florence, Arizona

The following tasks will be performed to abandon each corehole:

1. Borings will be cleaned to the bedrock contact using air lift or bailing methods. Groundwater production within the borehole and its condition from the land surface to the bedrock contact will be noted. Geophysical logging (primarily borehole televiewer) may be used as necessary to help characterize subsurface conditions.
2. A tremie pipe will be installed to approximately 20 feet below the bedrock contact, and a high-density acid-resistant cement or high-solids bentonite slurry consisting of at least 30 percent solids will be placed in the corehole from the total corehole depth to 20 feet below the bedrock contact. The 3-inch diameter LCS casing will be utilized as a tremie pipe.
3. If 3-inch diameter LCS casing extends to the alluvium/bedrock contact, it will be perforated from approximately 20 feet above the top of bedrock to 20 feet below the bedrock. Perforation of the casing will be performed using blasting, mills knife, or equivalent methods.
4. A high-solids bentonite slurry (at least 30 percent solids) or Type V cement grout will be placed in the contact zone (from approximately 20 feet below the top of bedrock to approximately 20 feet above the top of bedrock).
5. A slurry of bentonite (or cement) grout and fine silica sand will be placed in the corehole from approximately 20 feet above the bedrock contact to approximately 50 feet below ground surface using tremie methods.
6. Cement grout will be placed in the corehole from a depth of 50 feet to 2 feet below ground surface.
7. In the event that the 3-inch diameter casing and the 5 1/2- inch to 6-inch diameter casing is observed to be loose at the land surface, an attempt will be made to remove the top 20 feet of both casings from the corehole. If removal the casing is not feasible, they will be left in the hole, and perforated as needed to allow an annular seal to be placed from 2 feet to 20 feet below the ground surface. In areas of agricultural use, the surface casings will be cut 4 to 5 feet below the ground surface.

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of
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2.6 DOCUMENTATION

The following information will be compiled for each corehole during abandonment activities:

- Completion of an ADWR Borehole Abandonment Form and a Corehole Abandonment Completion Report (per R12-15-816.K).
- A diagram for each boring depicting "as abandoned" conditions, including total borehole and casing depths.

- Location and methods of casing perforations, and placement methods, volumes, and filled intervals of abandonment materials.
- Documentation of perforation activities and abandonment materials, including:
 - perforation open areas,
 - solid content of bentonite slurries (if used),
 - volumes of various materials used in abandonment, and
 - description of abandonment procedures and any variations from the "typical" procedure.